



TITLE:

# Significance of portal venous VEGF during liver regeneration after hepatectomy.

AUTHOR(S):

Yamamoto, Chiduru; Yagi, Shintaro; Hori, Tomohide; Iida, Taku; Taniguchi, Kentaro; Isaji, Shuji; Uemoto, Shinji

---

CITATION:

Yamamoto, Chiduru ...[et al]. Significance of portal venous VEGF during liver regeneration after hepatectomy.. The Journal of surgical research 2010, 159(2): e37-e43

ISSUE DATE:

2010-04

URL:

<http://hdl.handle.net/2433/113888>

RIGHT:

© 2010 Elsevier B.V.; This is not the published version. Please cite only the published version.; この論文は出版社版ではありません。引用の際には出版社版をご確認ご利用ください。

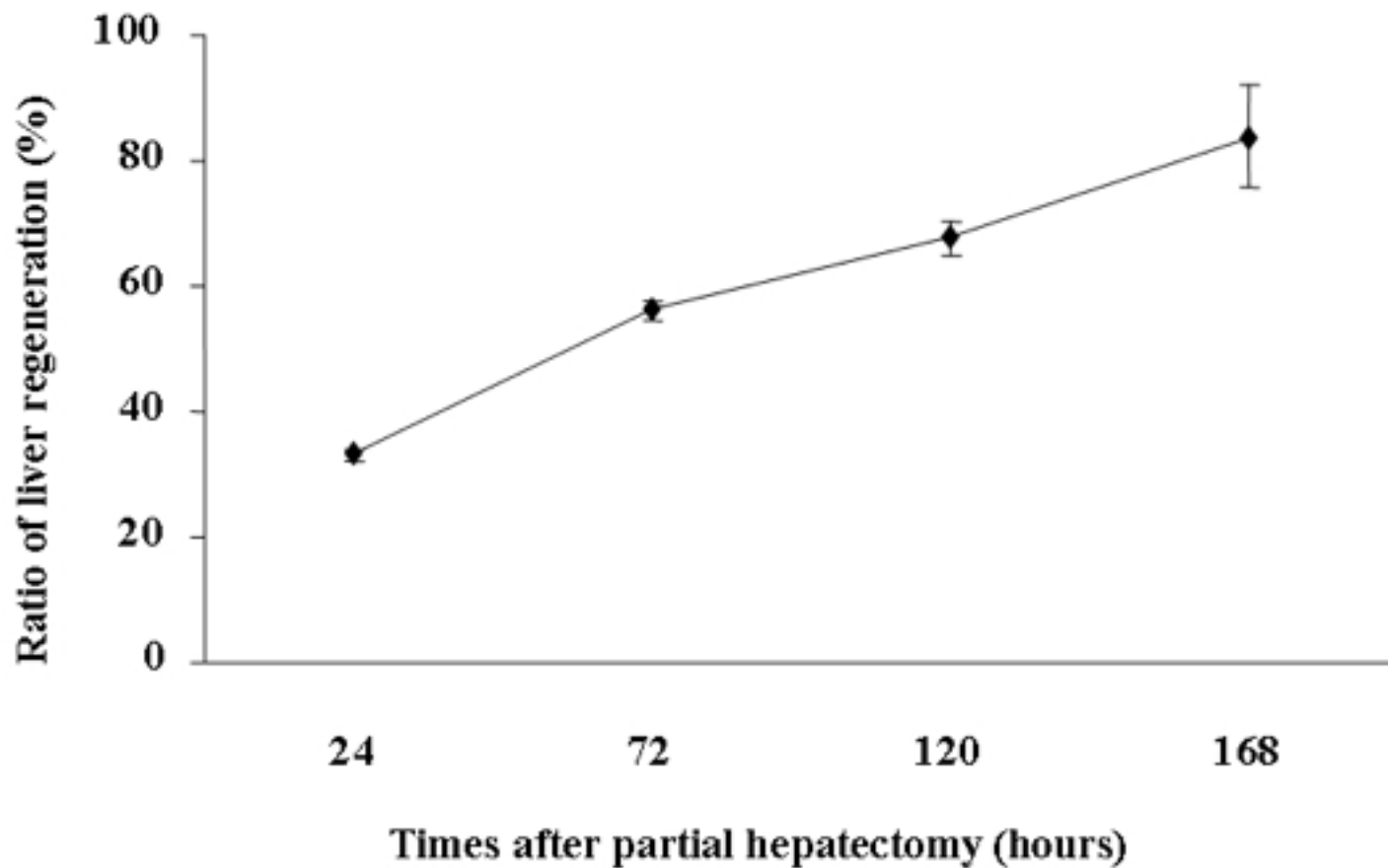
Table 1. Oligonucleotide sequences of primer pairs used in RT-PCR <sup>a</sup>

Gene	Forward primer	Reverse primer	PCR fragment size (bp)
VEGF	GAAC TTTCTGCTCTCTTGGG	CTGCATT CACATCTGCTATG	375
HIF-1 $\alpha$	GATCAGCCAGCAAGTCCTTC	GGAGCTGTGAATGTGCTGTG	1247
HGF	CCCAAATGTGACGTGTCAAG	TGTTTTGTTTTGGCACAGGA	335
HGFA	GGCAAGAGGCACAAGAAGAG	CAGCAACCAGGGGGACCAGT	508

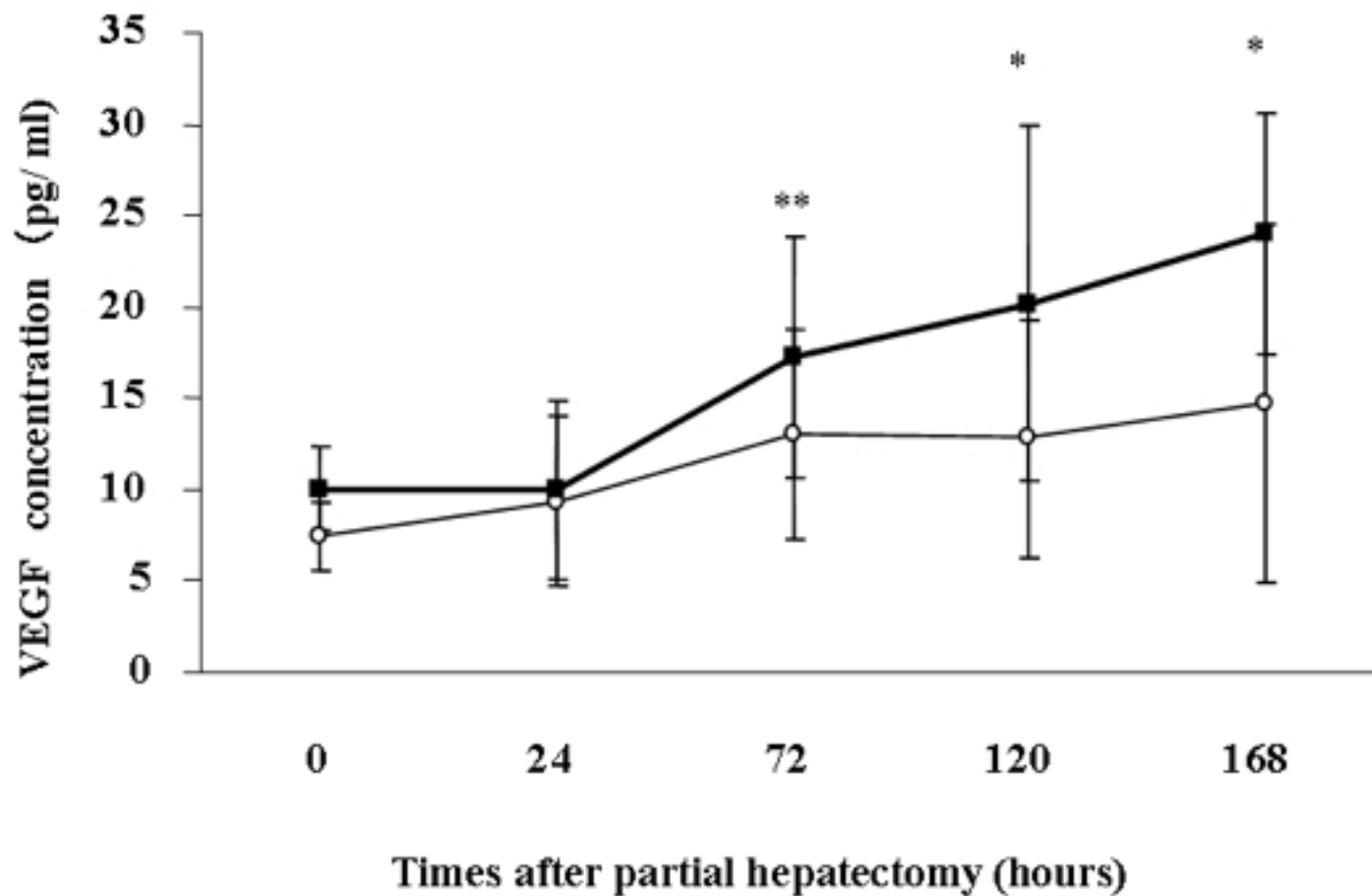
<sup>a</sup> Each gene was coamplified with GAPDH

## FIGURE LEGENDS

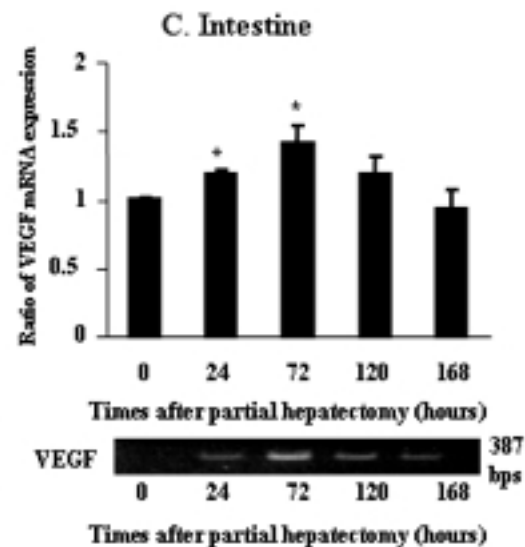
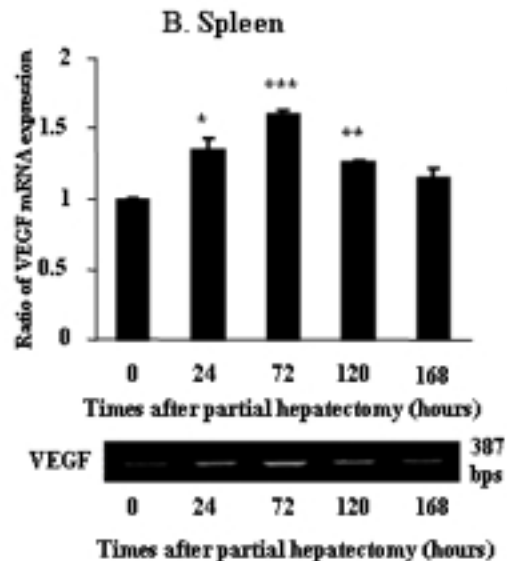
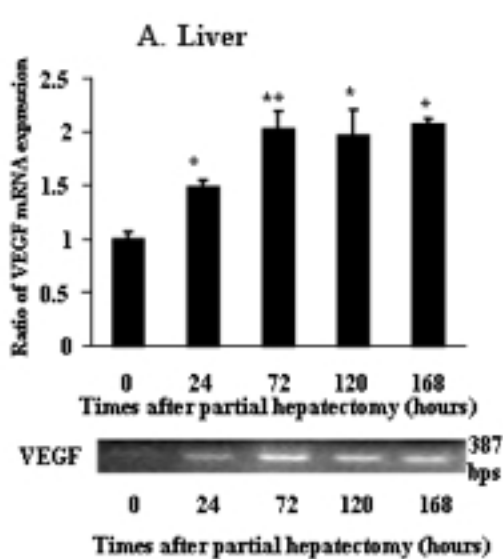
**Figure. 1.** The courses of liver regeneration during seven days after 70% partial hepatectomy. Values represent means  $\pm$  SD.



**Figure. 2.** The concentration of VEGF in plasma after 70% partial hepatectomy. Closed squares and opened circles represent portal venous blood and peripheral venous blood, respectively. \* $P < 0.05$  versus peripheral venous blood; \*\* $P < 0.01$  versus peripheral venous blood. Values represent means  $\pm$  SD.

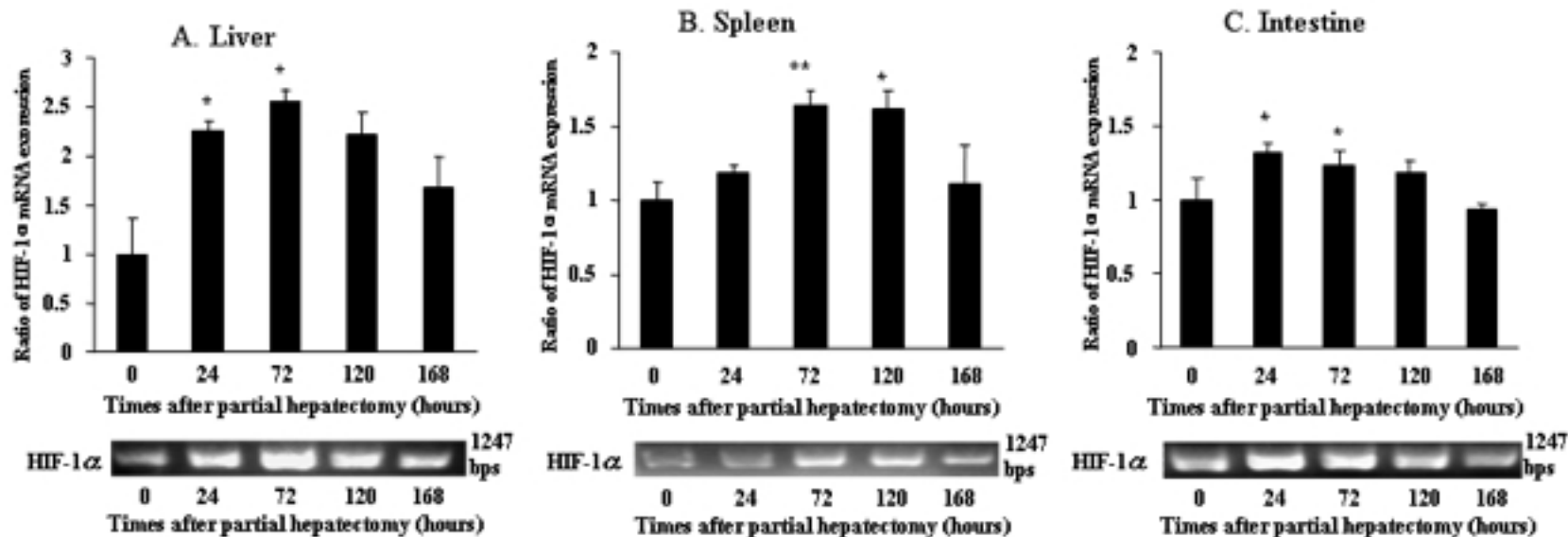


**Figure. 3.** Changes in ratio of vascular endothelial growth factor (VEGF) mRNA expression after 70% partial hepatectomy in liver (A), spleen (B) and intestine(C). 0: Pre-hepatectomy. \* $P<0.05$  versus 0 hours; \*\* $P<0.01$  versus 0 hours; \*\*\* $P<0.001$  versus 0 hours. Values represent means  $\pm$  SD.

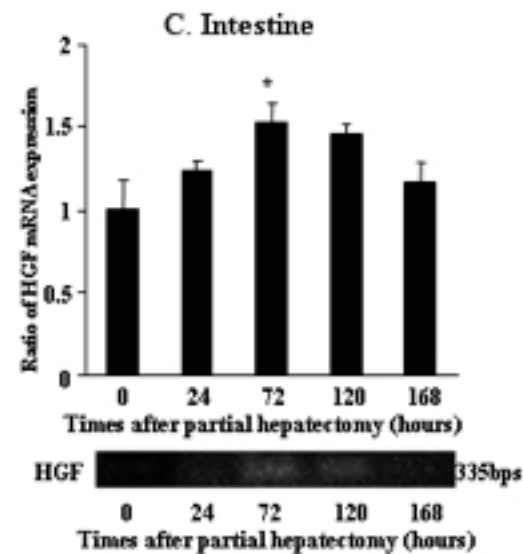
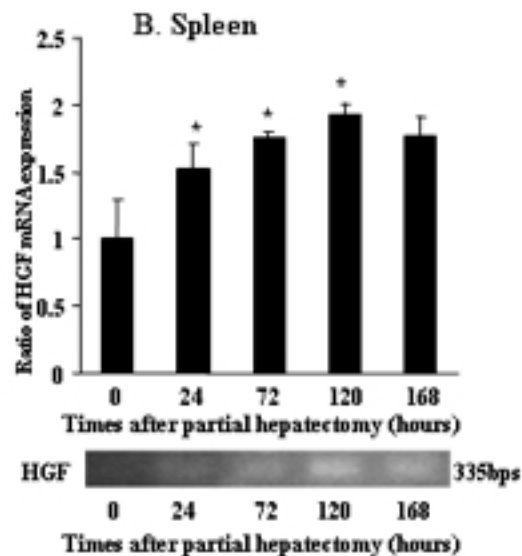
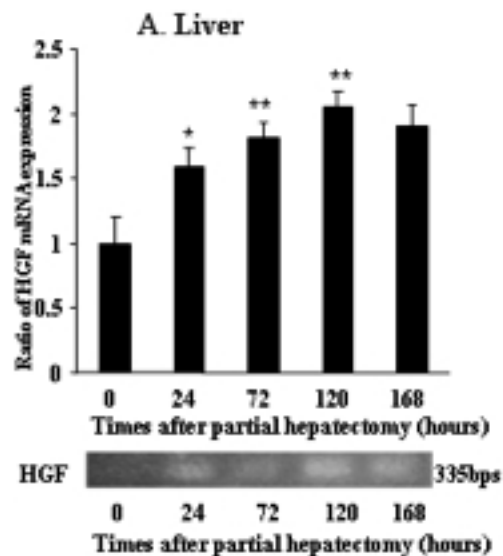




**Figure. 4.** Changes in ratio of hypoxia inducible factor-1 $\alpha$  (HIF-1 $\alpha$ ) mRNA expression after partial 70% hepatectomy in liver (A), spleen (B) and intestine (C). 0: Pre-hepatectomy. \* $P<0.05$  versus 0 hours; \*\* $P<0.01$  versus 0 hours. Values represent means  $\pm$  SD.



**Figure. 5.** Changes in ratio of hepatocyte growth factor (HGF) mRNA expression after 70% partial hepatectomy in liver (A), spleen (B) and intestine (C). 0: Pre-hepatectomy. \* $P < 0.05$  versus 0 hours; \*\* $P < 0.01$  versus 0 hours. Values represent means  $\pm$  SD.



**Figure. 6.** Changes in ratio of hepatocyte growth factor activator (HGFA) mRNA expression after 70% partial hepatectomy in liver (A), spleen (B) and intestine (C). 0: Pre-hepatectomy. \* $P < 0.05$  versus 0 hours; \*\* $P < 0.01$  versus 0 hours. Values represent means  $\pm$  SD.

